UNITED STATES PATENT AND TRADEMARK OFFICE

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/659,695	ABFALTER ET AL.
Office Action Summary	Examiner	Art Unit	
	JUE S. WANG	2193	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 January 2009</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,3,6-28,30-36 and 39</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1, 3 and 6-28, 30-36, and 39</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1, 3 and 6-28, 30-36, and 39 have been examined.

2.   Claims 4 and 5 were cancelled in Amendment dated 5/21/2008. Claims 2, 29, 37, and 38

were cancelled in Amendment dated 1/27/2009.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1, 3, 6-24, 26-28, 31-36, and 39 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Aghera et al. (US 2004/0098715 A1, hereinafter Aghera), in view of Kraml et

al. (US 6,141,683, hereinafter Kraml).

5.   As per claim 1, Aghera teaches the invention as claimed, including a method for

installing software to software-defined radio equipment comprising the steps of:

        transferring, via radio frequency (RF) communication, software directly to a software-

defined radio device from a software server to create transferred software, said software server

remotely located with respect to said software-defined radio device (see Fig 1, [0002], [0022]-

[0024]), wherein said transferred software is stored to at least a portion of a data store associated

with said software-defined radio device (see [0031], [0032], [0050], [0057], [0058]); and,

sending an instruction via RF communication directly to said software-defined radio device specifying a version of software to be loaded by said software-defined radio device during a restart of said software-defined radio device (see [0026], [0043], [0053], [0058]-[0060]); and

wherein said selected software application is to be loaded to said software-defined radio device during a restart of said software-defined radio device (see [0038], [0056]).

Aghera does not explicitly teach sending an instruction via RF communication directly to said software-defined radio device identifying a selected software application which specifies whether said transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device.

Kraml teaches sending an instruction via RF communication directly to a device identifying a selected software application which specifies whether a transferred software or a currently running software will be loaded by said device during a restart of the device (i.e., the command to remote computer to store the address of the location of version n or n+1 into pointer, see Fig 1, Fig 2, Fig 4, steps 401, 403, 405, 412, column 1, lines 40-45, column 5, lines 45-50, column 6, lines 15-61).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Aghera to send an instruction via RF communication directly to said software-defined radio device identifying a selected software application which specifies whether said transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device as taught by Kraml such that if the new version of the software application is or becomes unusable for any reason, the device can quickly roll-back to the older version (see column 3, lines 33-37 of Kraml).

6.   As per claim 3, Aghera further teaches monitoring said transferring of said transferred

software and monitoring said loading of said selected software application (see [0028], [0049],

[0053]-[0055]).

7.   As per claim 6, Aghera further teaches said instruction identifies a software version (see

[0026], [0047], [0058]).

8.   As per claim 7, Aghera further teaches wherein said software-defined radio device

comprises a plurality of software defined radio devices (see [0024]).

9.   As per claim 8, Aghera teaches receiving an error indication in response to a fault being

detected in at least one of said transferring of said transferred software or said loading of said

selected software application (see [0041], [0049], [0055], [0059]).

10.   As per claim 9, Aghera further teaches said transferred software comprises a plurality of

software components (see [0032]).

11.   As per claim 10, Aghera further teaches receiving a version indicator from said software-

defined radio device, said version indicator identifying software which is currently loaded on

said software-defined radio device (see [0026], [0045], [0053]; EN: the operator would be

capable of seeing the version).

12.   As per claim 11, Aghera teaches receiving a software listing from said software-defined

radio device, said software listing identifying software currently available on said data store (i.e.,

patch profile maintains version information of all upgradeable software component on the

wireless device, see [0030]).

13.   As per claim 12, Aghera further teaches wherein said transferred software is stored to a

second data store associated with said software-defined device (see [0050]).

14.   As per claim 13, Aghera further teaches said second data store is nonvolatile (see [0050];

EN: EEPROM is non-volatile memory).

15.   As per claim 14, Aghera further teaches wherein said transferring of said transferred

software occurs in response to said software-defined radio device continuing to perform

software-defined radio functions (see [0054]; EN: As the download is OTA, the radio must still

perform wireless radio functionality during the transfer of the updates).

16.   As per claim 15, Aghera further teaches that the software server is a computer operatively

connected to said software-defined radio device via a wireless communications network (see

[0024]).

17.   As per claim 16, Aghera teaches the invention as claimed, including a method

comprising:

receiving, via radio frequency (RF) communication directly from a software server, transferred software at a software-defined radio device, said software server remotely located with respect to said software-defined radio device (see Fig 1, [0002], [0022]-[0024]);

storing said transferred software to at least a portion of a data store associated with said software-defined radio device (see [0031], [0032], [0050], [0057], [0058]);

receiving, via radio frequency (RF) communication directly from said software server, an instruction at said software-defined radio device identifying a version of the software to be loaded by said software-defined radio device during a restart of said software-defined radio device (see [0026], [0043], [0053], [0058]-[0060]);

responsive to a restart instruction, restarting said software-defined radio and loading said selected software application (see [0038], [0056]); and

verifying said selected software application is loaded successfully (see Fig 11, [0059]).

Aghera does not explicitly teach receiving, via RF communication directly from said software server, an instruction identifying a selected software application which specifies whether said transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device.

Kraml teaches receiving, via RF communication directly from a software server, an instruction identifying a selected software application which specifies whether a transferred software or a currently running software will be loaded by a remote device during a restart of the device (i.e., the command to remote computer to store the address of the location of version n or n+1 into pointer, see Fig 1, Fig 2, Fig 4, steps 401, 403, 405, 412, column 1, lines 40-45, column 5, lines 45-50, column 6, lines 15-61).

It would have been obvious to one of ordinary skill in the art at the time of the invention

to have modified Aghera to receive via RF communication directly from said software server, an

instruction identifying a selected software application which specifies whether said transferred

software or currently running software will be loaded by said software-defined radio device

during a restart of said software-defined radio device as taught by Kraml such that if the new

version of the software application is or becomes unusable for any reason, the device can quickly

roll-back to the older version (see column 3, lines 33-37 of Kraml).

18.   As per claim 17, Aghera teaches automatically reverting from said selected software

application to a previous software version in response to a fault being detected in said loading

step (see [0055], [0059]).

19.   As per claim 18, Aghera teaches providing an error indication in response to said fault

detection (see [0041]).

20.   As per claim 19, Aghera teaches monitoring said receiving transferred software step and

providing an error indication in response to a fault being detected in said receiving transferred

software step (see [0041], [0049]).

21.   As per claims 20-24 and 26, these claims recite limitations that are substantially similar

to the limitations of claims 6 and 10-14. Therefore, they are rejected using the same reasons as

claims 6 and 10-14.

22.   As per claim 27, Aghera teaches the invention as claimed, including a software-defined

radio device comprising:

        an RF communications interface configured to receive transferred software and an

instruction directly from a software server remotely located with respect to said software-defined

radio device (see Fig 1, [0002], [0022]-[0024]), wherein said software server comprises a man-

machine interface for receiving from a system operator said instruction identifying a version of

the software to be loaded at a restart of said software-defined radio device (see [0026], [0043],

[0053], [0058]-[0060]);

        a data store associated with said software-defined radio device configured to store said

transferred software on at least a portion of said data store (see [0031], [0032], [0050], [0057],

[0058]); and

        a processor programmed to:

                load said selected one of said transferred software and said currently running

        software to said software-defined radio device during said restart of said software-defined

        radio device (see [0038], [0056]); and

                automatically revert from said selected software to a previous software version

        responsive to a fault in said loading of said selected software (see [0055], [0059]).

        Aghera does not explicitly teach sending an instruction identifying a selected software

application which specifies whether said transferred software or currently running software will

be loaded by said software-defined radio device during a restart of said software-defined radio

device.

Kraml teaches sending an instruction identifying a selected software application which specifies whether a transferred software or a currently running software will be loaded by a remote device during a restart of the device (i.e., the command to remote computer to store the address of the location of version n or n+1 into pointer, see Fig 1, Fig 2, Fig 4, steps 401, 403, 405, 412, column 1, lines 40-45, column 5, lines 45-50, column 6, lines 15-61).

It would have been obvious to one of ordinary skill in the art at the time of the invention to have modified Aghera to send an instruction identifying a selected software application which specifies whether said transferred software or currently running software will be loaded by said software-defined radio device during a restart of said software-defined radio device as taught by Kraml such that if the new version of the software application is or becomes unusable for any reason, the device can quickly roll-back to the older version (see column 3, lines 33-37 of Kraml).

23.   As per claim 28, Aghera teaches said processor is further programmed to determine that said software and said instruction are received successfully and to determine that said selected software is loaded successfully (see [0049], [0055]).

24.   As per claims 31-36, these system claims recite limitations that are substantially similar to the limitations recited in claims 9-14. Therefore, they are rejected using the same reasons as claims 9-14.

25.   As per claim 39, the limitations recited in this computer-readable medium claim are

substantially similar to the limitations recited in claim 16. Therefore, it is rejected using the same

reasons as claim 16.

26.   Claims 25 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aghera

et al. (US 2004/0098715 A1, hereinafter Aghera), in view of Kraml et al. (US 6,141,683,

hereinafter Kraml), further in view of Simionescu et al. (US 2003/0084337 A1, hereinafter

Simionescu).

27.   As per claim 25, Aghera and Kraml do not explicitly teach decompressing the software

after receiving the software.

        Simionescu teaches decompressing a software at the host machine after receiving the

software (see [0066]).

        It would have been obvious to one of ordinary skill in the art at the time the invention to

have modified Aghera and Kraml to compress and decompress the transferred software as taught

by Simionescu because compression is a well known technique in the art to reduce the size of the

software being transferred to reduce download time and bandwidth.

28.   As per claim 30, Aghera and Kraml do not explicitly teach a compression application for

compressing the software prior to said software being transferred.

        Simionescu teaches compressing a software prior to the software being transferred (see

[0066]).

It would have been obvious to one of ordinary skill in the art at the time the invention to have modified Aghera and Kraml to compress and decompress the transferred software as taught by Simionescu because compression is a well known technique in the art to reduce the size of the software being transferred to reduce download time and bandwidth.

Response to Arguments

29.　　Rejection of Claims under 35 U.S.C. § 103(a):

30.　　As per independent claims 1, 16, and 27, and 39, Applicants' arguments have been fully considered but are moot in light of the new grounds of rejection.

Conclusion

31.　　The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- o　Kozaki et al. (US 5,828,888) is cited to teach computer network having os-version management table to initiate network boot process via master computer.

32.　　Applicant's amendment necessitated the new ground(s) of rejection presented in this office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

33.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Jue S. Wang whose telephone number is (571) 270-1655. The

examiner can normally be reached on M-Th 7:30 am - 5:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Lewis Bullock can be reached on 571-272-3759. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lewis A. Bullock, Jr./   Jue Wang
Supervisory Patent Examiner, Art Unit 2193   Examiner
                                                                 Art Unit 2193